

### Abstract of the Disclosure

A metrology instrument for measuring grating-like microstructures on a sample for parameters of interest is characterized by an illumination spot that is elongated. The elongated illumination spot is produced by providing the designing the illumination optics to have a limiting aperture that is also elongated. The limiting aperture and corresponding illumination spot will have respective long directions that are perpendicular to each other. The sample is supported in a measurement relation to the instrument wherein the illumination spot is oriented generally transverse to linear elements of a microstructure. The microstructure can be also be a two-dimensional bigrating, with the illumination spot on a row or column of the bigrating.

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